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#### INSTALLATION INSTRUCTIONS FDR25 AND FDR25SS ROUND FIRE DAMPER 11/2 HOUR UL555 RATED

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APPLICATION

The FDR25(SS) are "true" round, single blade dampers. They are designed for use with round duct and the openings may be square or round. The standard installation is with the leading edge of the closed blade within the walls, partitions or masonry floors; with fire resistance rating of less than 3 hours. Installation may be obtained with the "CINCH" plate on one side for metal stud or masonry walls and "CINCH" plate both sides for wood stud wall and masonry floors.

#### MOUNTING

Vertical or horizontal.

#### MINIMUM SIZE

6" (152) diameter.

#### MAXIMUM UL CLASSIFIED SIZE

24" (610) diameter.

Dimensions shown in parenthesis ( ) indicate millimeters.

#### **RETAINING "CINCH" PLATES** (see section 4)



#### **RETAINING "CINCH" PLATE**

# CULUS SEE COMPLETE MARKING

#### 1. Expansion Gap

A **square** opening in wood or metal stud walls or masonry walls and floors shall be a minimum of 1" (25) and a maximum of  $2^{1/2}$ " (64) larger than the damper diameter. A **round** opening in masonry walls or floors shall be a minimum of 1" (25) and a maximum of  $2^{1/2}$ " (64) larger than the damper diameter.

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# THE RETAINING "CINCH" PLATE MUST OVERLAP THE OPENING A MINIMUM OF 1" (25).

#### 2. Damper Sleeve

The sleeve is integral to the damper and shall be of equal to or heavier than the gage of the duct as described in NFPA90A and as defined by the appropriate SMACNA duct construction standard.

#### 3. Damper Orientation

The leading edge of the blade in the closed position must be within the plane of the wall. Vertical installation is illustrated and horizontal is similar (see General Installation). The damper may be installed with up to a 30 degree variance of the axle being horizontal (see Blade Orientation section). Approved with airflow in any direction.

#### 4. Retaining "Cinch" Plates

#### DO NOT PLACE CINCH PLATES IN GROOVE

Place retaining cinch plates around the damper sleeve and "cinch" against the sleeve with the screw provided on the cinching device (see "Cinch" Plate section). The plates are designed to grab and hold the sleeve while mounting flush against the wall or floor retaining the damper securely in the opening. The plates must overlap the opening a minimum of 1" (25) (see "Cinch" Plate section).

# The "Cinch" plates are fastened to the wall or floor according to the following:

- Masonry Wall "Cinch" plate required on only one side of the wall fastened to the wall with a minimum of 1 <sup>1</sup>/4" (6) #10 masonry screw.
- Masonry Floor "Cinch" plate required on both sides of the floor fastened to the floor with a minimum of 1 1/4" (6) #10 masonry screw.
- Metal Stud Wall "Cinch" plate required on only one side of the wall fastened to the wall by engaging the metal stud a minimum of 1/2" (13) with a #10 screw.
- Wood Stud Wall "Cinch" plate required on both sides of the wall fastened to the wall by engaging the wood stud a minimum of 11/2" (38) with a #10 screw.

#### 5. Duct/Sleeve Connections

Round break-away connections must be used. Either a 4" (102) wide drawband or #10 sheet metal screws spaced equally around the circumference of the ducts as follows:

- Duct diameters 22" (559) and smaller 3 screws.
- Duct diameters over 22" (559) to 24" (610) 5 screws.

**Note**: When optional sealing of these joints is desired, the following sealants may be applied in accordance with the sealant manufacturer's instructions: Hardcast, Inc. - Iron Grip 601, Precision - PA2084T, ECO Duct Seal 44-52 or Design Polymerics - DP 1010

#### 6. Installation and Maintenance

Do not compress or stretch the damper frame into the duct or opening. Lift or handle the damper using sleeve or frame. Do not lift damper using blade. Each fire damper should be examined on a regular basis to ensure it is not rusted or blocked. Consult NFPA for recommendations on maintenance and testing intervals. Care should be exercised to ensure that such tests are performed safely and do not cause system damage.

### **GENERAL INSTALLATION**

#### In 1 and 2 Hr. Rated Masonry Floors and Ceilings or Walls



#### ITEM DESCRIPTION

- 1. FDR25 Round Fire Damper
- Retaining "Cinch" Plate, 20 ga. steel 2. (only one plate is required on walls, as shown, and two plates are required on floors).
- 3. Duct
- 4. Masonry Wall or Floor
- 5. #10 Concrete Anchor,
- (min 11/4" (31) long
- **Duct/Sleeve Connection** 6.
- Expansion Gap 7.

Note: Masonry walls only require a "cinch" plate on one side of the wall. Masonry floors require a "cinch" plate on both top and bottom side of the floor.



Within Square Opening in Metal or Wood Stud Framed 1 and 2 Hr. Rated Drywall Partitions



**FIGURE 4** 

#### ITEM DESCRIPTION

- 1. FDR25 Round Fire/Smoke Damper
- Retaining "Cinch" Plate, 20 ga. steel 2. (only one plate is required on metal stud walls, and two plates are required on wood stud walls).
- Duct 3.
- 4 Metal Stud Wall (plate required on only one side)
- 5. Wood Stud Wall (plate required on both sides)
- 6. Expansion Gap
- **Duct/Sleeve Connection** 7.
- 8. #10 Sheet Metal Screw (refer to section 4 for fastener requirements).

Note: Metal stud walls require retaining "cinch" plates on only one side of the wall. Wood stud walls require retaining "cinch" plates on both sides of the wall.



**FIGURE 3** 



30 Deg. Off Horizontal Maximum Axle Position

## **BLADE ORIENTATION**



NORMAL Axle In Horizontal Position



#### RECOMMENDED FRAMING FOR OPENINGS IN WOOD AND METAL STUD WALLS



In metal stud construction, exposed steel surfaces need not be covered with gypsum wallboard.

In wood stud construction, gypsum wallboard must cover all wood stud surfaces.



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